As manufacturer of safety equipment, the Cobianchi Liftteile AG company is responsible for the design and manufacture of the Cobianchi progressive safety gears (downward, PC30DO/PC60DO) and brake devices (upward, PC30UP/PC60UP).
In order to make the production, the distribution, and the maintenance of our progressive safety gears and brake devices easier for the manufacturers of the framework and for the installation companies, these operating instructions have been established.

These operating instructions document the standard versions PC30DO for installation width 180/240mm and PC60DO with installation width 240mm. The upwards braking brake devices PC30UP and PC60UP identical with the downwards braking brake devices PC30DO und PC60DO, but rotated by 180°. If your installation type differs from the versions described in these instructions, please contact your technical office or the responsible construction department.

In the following you will find important notes, which if properly observed will contribute to an impeccable installation and operation.

The following three drawings have to be enclosed with these instructions:

Drawing no.	Brake type	Front view, top view, side view
30DO-BA01-2	PC30DO/UP installation width 180/200mm	Assembly drawing FV with Pos. no.
30DO-BA01-6	PC30DO/UP installation width 240 mm	Assembly drawing FV with Pos. no.
60DO-BA01-2	PC60DO/UP installation width 240 mm	Assembly drawing FV with Pos. no.

These operating instructions consist of some pages of text (number depending on the language) and three drawings. Customer-specific solutions may require deviating installation sequences. The progressive safety gears and the brake devices can be installed at the top of or underneath the cabin, considering the position of the connection shaft and the lifter rope engagement. For detailed information, please refer to our technical documentation.

Subject to deviations from the standard versions described here.

To be observed prior to the installation:
One pair (basic unit) consists of two adjusted and sealed green safety gear heads (Pos. 1). They can be ordered with top lifter rope engagement or bottom lifter rope engagement. All performance specifications on the type plates refer to the use in pairs. The serial numbers are embossed on the safety gear heads (Pos. 1). These numbers must correspond to the serial number on the type plates attached and enclosed and must be able to be allocated to the serial number of the installation. If this is not the case, then a mistake has been made and it is necessary to refer back to the purchasing department, your own stores department or directly with the manufacturer.

1. Assembly

1.1. Assembly and alignment of safety gear heads

As a standard, delivery is made as basic unit (two green safety gear heads, Pos. 1), fully mounted with sealed adjustment. The following accessories are available on request: four gusset plates (Pos. 3), two support plates (Pos. 6), one lifter on the left and right (Pos. 2), stop-trigger bushing (Pos. 8) and one limit switch (Pos. 7). The trigger bushing (Pos. 8) and the limit switch (Pos. 7) are mounted on the safety gear rope side. The installation of the safety gear heads (Pos. 1) in the safety gear frame in any case has to be made using four bearing shafts (Pos. 14). The bearing shafts (Pos. 14) and the mounting holes in the housings should be greased.
If gusset plates (Pos. 3) are provided, they must be screwed to the frame using an adequate number of M12 or M16 screws. Secure absorption of the torque acting on the frame structure via the gusset plates (Pos. 3) during the brake process must be ensured.
The green safety gear heads (Pos. 1) are secured in a neutral position by means of the pressure springs (Pos. 16) on the side. For each head (Pos. 16) one pressure spring (Pos. 15) is mounted to one bearing shaft (Pos. 14), on the **brake wedge side** (Pos. 11). The M6 set screw (Pos. 15) on the opposite side is used to adjust the position of the safety gear heads (Pos.1) with respect to the rail. Recommendation: Distance fixed brake shoe (Pos. 13) to guide rail running surface 2.0mm. The running surface width of the brake shoes (Pos. 13) must not be below the minimum value. For correct installation, the distance from the safety gear housing bottom to the rail head front side is normally 3-4mm. This distance should be centred relative to both safety gear housings, using a depth gauge. If necessary, re-adjust cabin guide shoes.

1.2. Mounting of connection shaft between safety gear heads/support plates

The wedge safety gears described here are designed for an externally positioned connection shaft. The shaft itself is not within our scope of supply. Please use a structural steel tube 20x20x2.5 or 3mm according to DIN2395-3. For the respective length of the connection shaft refer to drawings enclosed. Mounting of the support plates (Pos. 6) has to be made according to the drawings enclosed. Note: The position of the connection shafts must correspond exactly to the indicated position. The shaft is inserted in the two support plates (Pos. 6) with a stop bushing (opposite safety gear rope side) and a triggering bushing (Pos. 8) on the safety gear rope side.

1.3. Mounting of lifter

The lifters (Pos. 2) are connected to the brake wedges (Pos. 11) by means of the eyebolt (Pos. 17). Please observe the correct order: 1. Put lifter (Pos. 2) with elongated hole over eyebolt (Pos. 17, 2. Slide washer over eyebolt (Pos. 17), 3. Slide pressure spring over eyebolt (Pos. 17) up to washer and slightly press spring together 4. Loosen locking nut until eyebolt (Pos. 17) protrudes from nut by approx. one turn. Then insert connection shaft through support plates (Pos. 6) and lifter (Pos. 2) and position in the support plates by means of the stop and triggering bushing (Pos. 8). To make it easier to insert the connection shaft in the lifter (Pos. 2) slightly lift brake wedges (Pos. 11) Then check that all bolts and nuts are tightened. Before hooking in the release mechanism tension spring (Pos. 10) at the safety gear frame (tension spring by 5-10mm) check manually **that the brake wedges (Pos. 11) of the two safety gear heads (Pos. 1) synchronously stop at the guide rail when the connection shaft rotates and they have the same vertical position when in open position/neutral position. In the case of great centre distances the connection shaft has to be reinforced.**

1.4. Mounting for safety-limit switch

Screw limit switch (Pos. 7) to the support plate (Pos. 6) on the safety gear rope side and check that the triggering bushing (Pos. 8) securely activates the limit switch (Pos. 7) through the rotation of the connection shaft.

1.5. Type plate

Before attaching the enclosed type plate in a clearly visible position of the frame, the intended surface must be cleaned and be completely dry. The adhesive surface of the type plate must not be touched over a large surface. After adhering press firmly.

1.6. Indicating label for oiled rails

Every progressive safety gear or brake device for use with oiled rails is supplied with a yellow indicating label. This should be attached in a clearly visible position (e.g. on rail oiler). Only an ordinary machine oil of the viscosity class ISO VG 68-150 must be used without any extreme-pressure additives (lubrication oil C according to DIN 51517, part 1). Because lubricating oils for gearboxes, engines or hydraulic units frequently contain additives, they are not suitable for this application.

2. Connection

Wire limit switch (230V, 4A) (Pos. 7) and check function.
Connect safety gear rope with rope end connections of safety rope connector (Pos. 10) at lifter (Pos. 2). The release force at the lifter (Pos. 2) required for the safety gear to engage is maximally 150-250N. It must be ensured that the tensile force in the limiter rope generated by the released speed limiter is at least 2 times the force required for the safety gear to engage (however, at least 300N).

3. Commissioning

Note: To be observed prior to the first safety gear test:
In all cases, dirt, rust-protection, and eventual paint coats have to be removed from the guide rail running surfaces. This is made best using cold cleaning agents or brake disk cleaning agents.
For oiled rails, lubrication oil C according to DIN 51517, part 1 recommended according to yellow label or equal should be used.

4. Maintenance

If the progressive safety gears or brake devices have been correctly installed, then the maintenance is limited to the following checks:

4.1. Condition of rails:
according to above commissioning instruction

4.2. Triggering linkage:
Synchronous response of lifters (Pos. 2), connection without any play through connection shaft, free movement of lifters (Pos. 2) and brake wedges (Pos. 11) in the respective direction.

4.3. Limit switch:
Correct electrical/mechanical functioning, actuation ensured

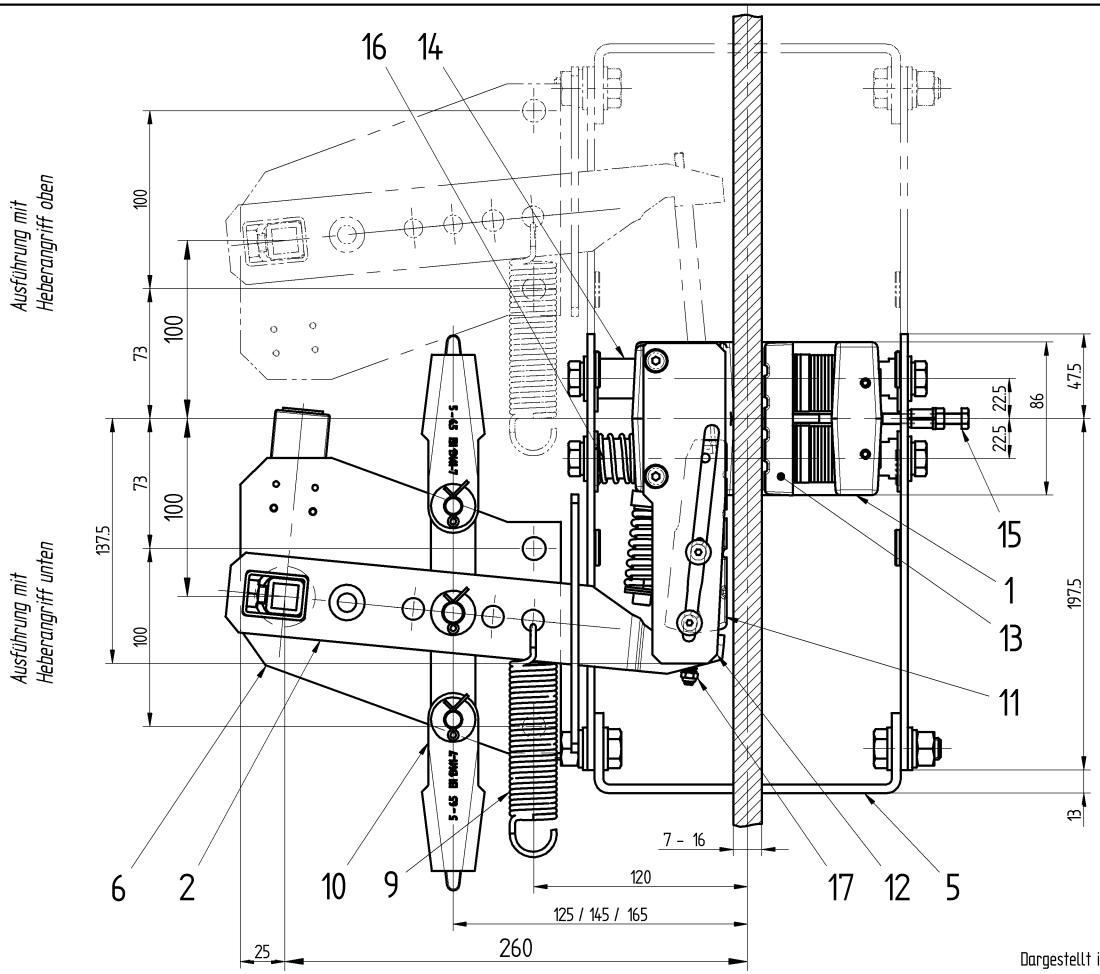
4.4. Safety gear heads:
centred, clean

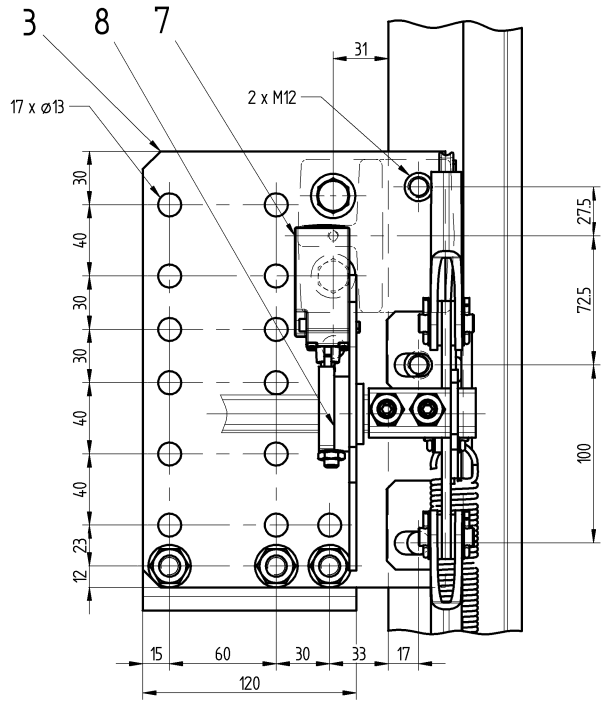
4.5. Guide-ways of cabin:
In an impeccable condition, not widened.

4.6. Cleanliness:
In general and in particular in the case of building construction elevators and conversions of existing installations: make sure that the safety gear heads (Pos. 1) are protected against contamination with plaster, concrete, cement, mortar, gravel or other materials. Contaminated safety gear heads have to be dismantled and cleaned.

If these simple instructions are followed, then the safety for the users of the elevator as well as for the installation company can be increased significantly.

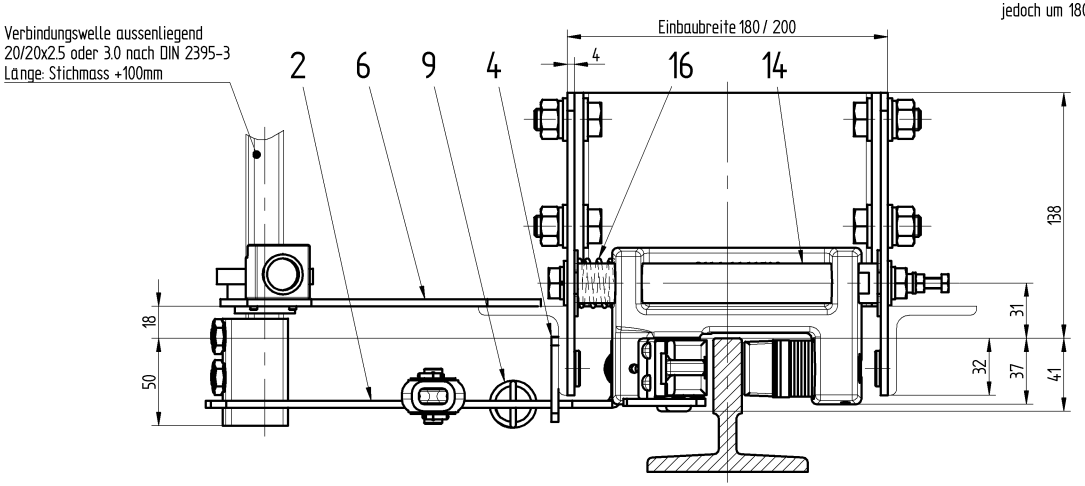
Das Urheberrecht auf dieser Zeichnung und allen Beilagen, die dem Empfänger persönlich anvertraut sind, verbleibt jederzeit unserer Firma. Ohne unsere schriftliche Genehmigung darf diese nicht eingelesen (EDV), kopiert, vervielfältigt und niemals Dritten mitgeteilt oder zugänglich gemacht werden.





Technische Änderungen vorbehalten

Dargestellt ist die Bremsfangvorrichtung PC30DO.
Die Bremseinrichtung aufwärts PC30UP ist analog, jedoch um 180° gedreht.



Stückzahlen pro Fangvorrichtung

Stk.	Gegenstand	Pos.	Werkstoff	Modell	Bemerkungen
2	Augenschraube	17	-	-	-
2	Druckfeder 180/200mm	16	-	-	-
2	Einstellschraube M6	15	-	-	-
4	Aufnahmeachse 180/200mm	14	-	1500-36-1/-3	-
2	Bremsbacke	13	-	30DA-16-2	-
2	Keilführungsblech	12	-	30DO-15-1a/b	-
2	Bremskeil	11	-	30DA-12-2/-4	-
1	Seilschlossgarnitur	10	-	FV-MZ30-1	-
1	Rückzugfeder 125mm	9	-	FV-MZ20-1	-
1	Anschlag - Auslösehülse	8	-	DA-MZ28-3	-
1	Endschalter	7	-	DA-MZ05-2	-
1	2 Stützblech	6	-	30DA-MZ45-3	-
1	2 Führungsschuhplatte 180/200mm	5	-	30DA-MZ40-1/-2	-
1	2 Anschlagwinkel oben/unten	4	-	30DO-MZ24-1/-2	-
1	4 Knotenblech	3	-	30DA-MZ19-1	-
1	2 Heber Li+Re	2	-	30DA-MZ01-3	-
1	Grundeinheit	1	-	30DO-N180D16.H	-

Änderung: (Dat/Ind)
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-

Ausgabe:
25.09.09 / DH

Zusammenstellung

zu Betriebsanleitung

FV-Typ: PC30DO/UP mit EB=180/200mm

Massstab	Gezeichnet	25.08.09	DH
1 : 3	Kontrolliert	25.09.09	DH
-	Geprüft	25.09.09	HG
-	Ersatz für:	-	

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Zeichnungsnummer
30DO-BA01-2

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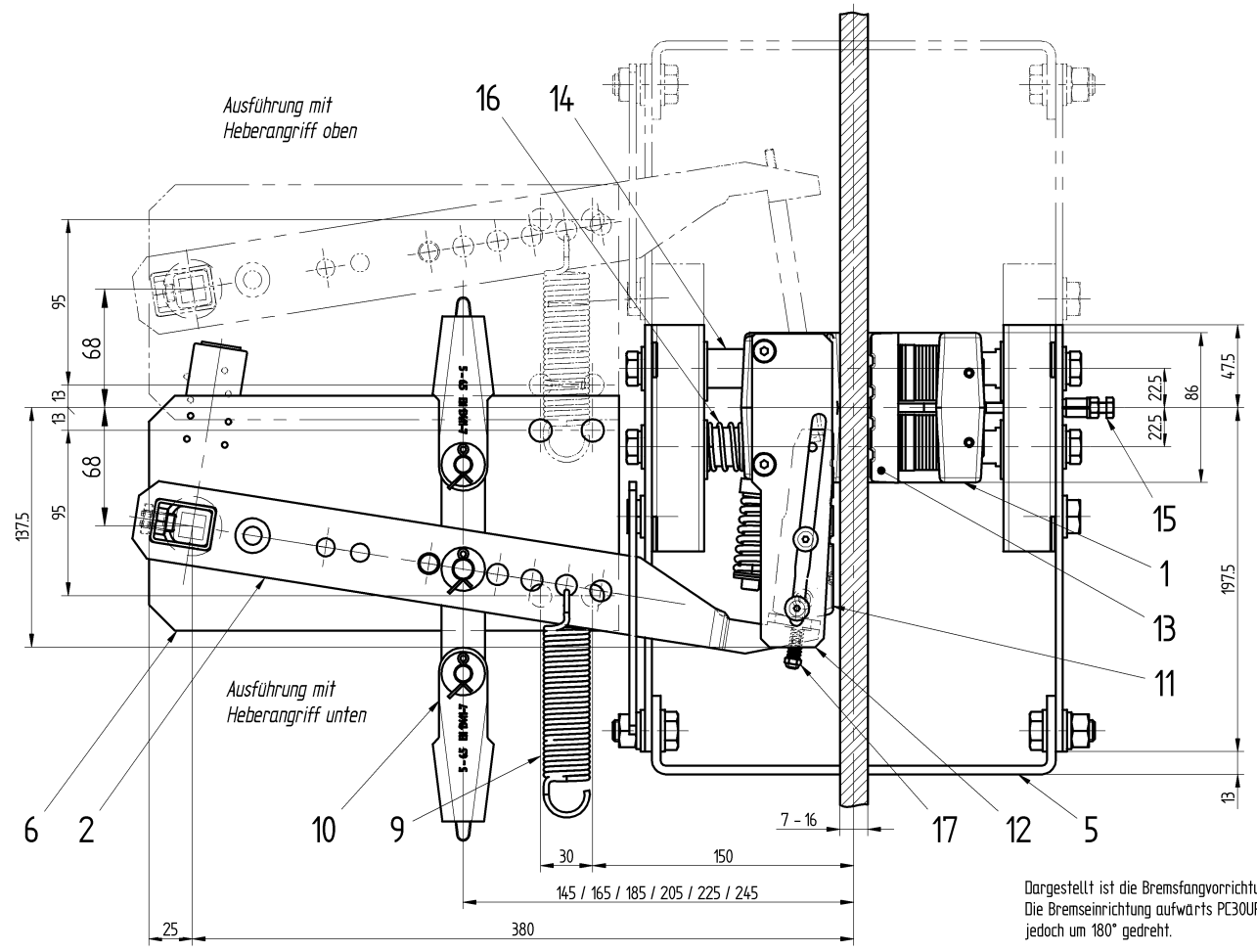
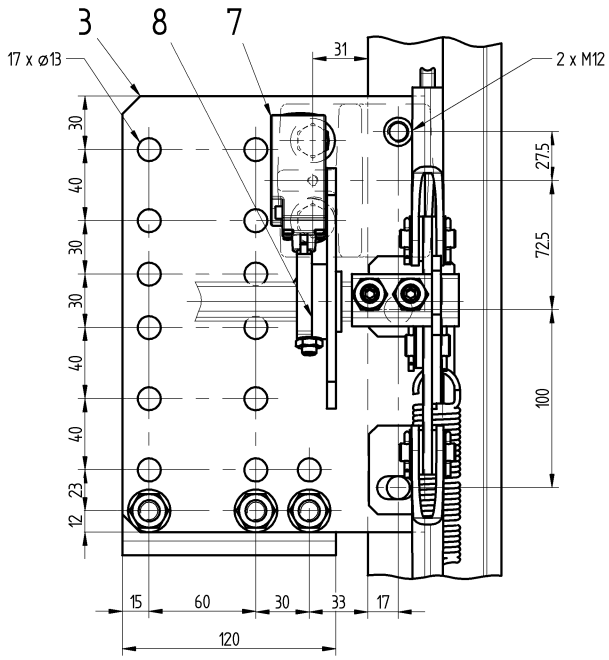
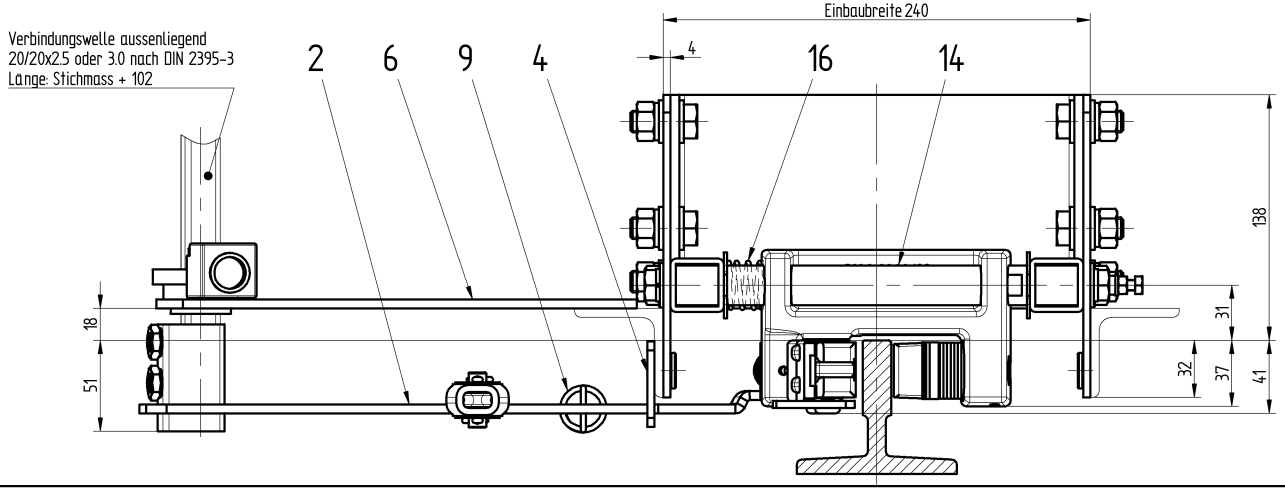




Dargestellt ist die Bremsfangvorrichtung PC30DO.
Die Bremseinrichtung aufwärts PC30UP ist analog, jedoch um 180° gedreht.



Q+P < 2'200kg; ohne Verstärkungsrohre
Q+P > 2'200kg; mit Verstärkungsrohre

Technische Änderungen vorbehalten

Stückzahlen pro Fangvorrichtung

Stk.	Stk.	Gegenstand	Pos.	Werkstoff	Modell	Bemerkungen
2	2	Augenschraube	17	-	-	-
-	2	Druckfeder 180mm	16	-	-	-
2	-	Druckfeder 240mm	16	-	-	-
2	2	Einstellschraube M6	15	-	-	-
-	4	Aufnahmeachse 240	14	-	1620-36-1	
4	-	Aufnahmeachse 240	14	-	1500-36-4	
2	2	Bremsbacke	13	-	30DA-16-2	
2	2	Keilführungsblech	12	-	30DO-15-1a/b	
2	2	Bremskeil	11	-	30DA-12-2/-4	
1	1	Seilschlossgarnitur	10	-	FV-MZ30-1	-
1	1	Rückzugfeder	9	-	FV-MZ20-1	-
1	1	Anschlag - Auslösehülse	8	-	DA-MZ28-3	-
1	1	Endschalter	7	-	DA-MZ05-2	-
1	1	2 Stützblech	6	-	60DA-MZ45-3	-
1	1	2 Führungsschuhplatte	5	-	30DA-MZ40-3	-
1	1	2 Anschlagwinkel oben/unten	4	-	30DO-MZ24-1/-2	-
-	1	4 Knotenblech mit Verstärkungsrohr	3	-	30DA-MZ19-1V	-
1	-	4 Knotenblech	3	-	30DA-MZ19-1	-
1	1	2 Heber Li+Re	2	-	60DA-MZ01-1	-
-	1	Grundeinheit mit Verstärkungsrohr	1	-	30DO-N180D16.HV	-
1	-	Grundeinheit	1	-	30DO-N180D16.H	-

Änderung: (Dat/Ind)
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Ausgabe:
25.09.09 / DH

Zusammenstellung

zu Betriebsanleitung
FV-Typ: PC30DO/UP mit EB=240mm

Massstab	Gezeichnet	25.08.09	DH
1 : 3	Kontrolliert	25.09.09	DH
-	Geprüft	25.09.09	HG
-	Ersatz für:	-	

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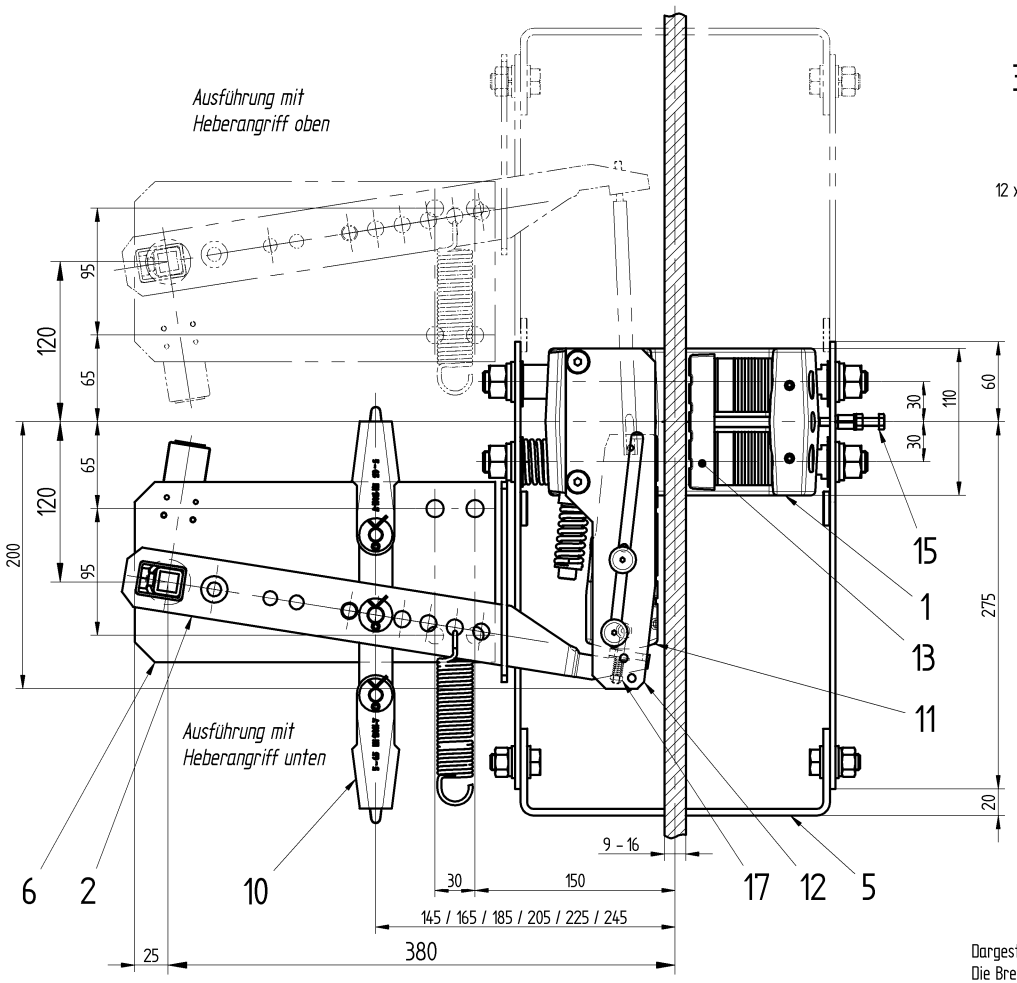
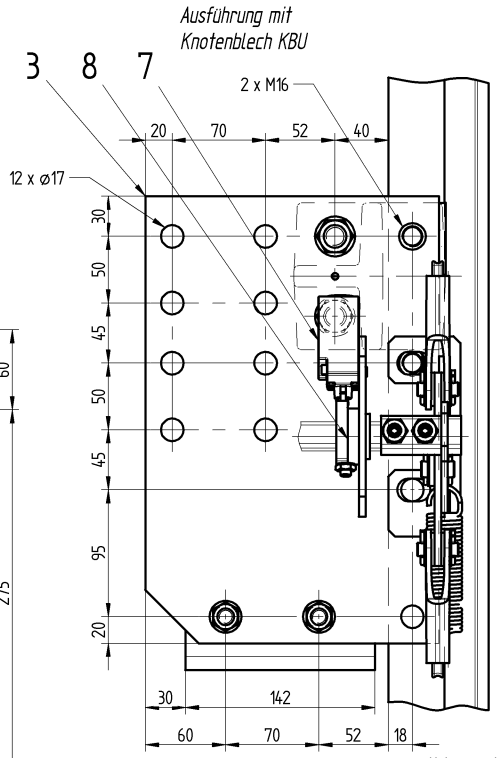
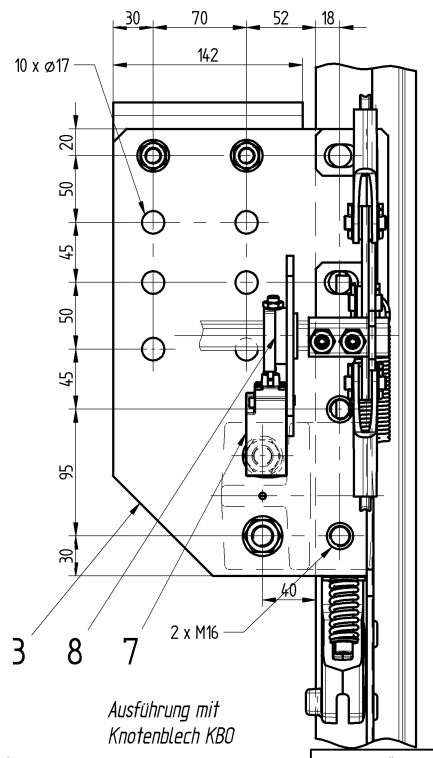
Zeichnungsnummer
30DO-BA01-6







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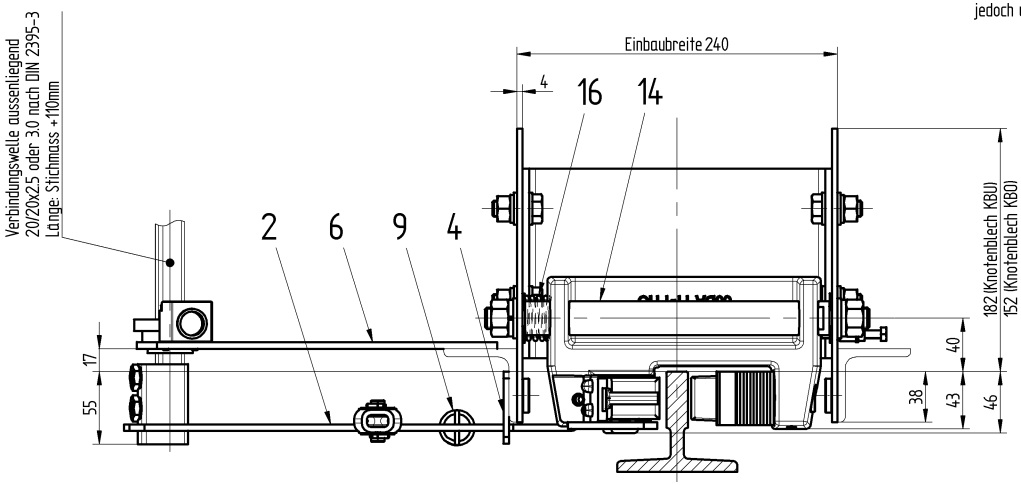
Technische Änderungen vorbehalten

Dargestellt ist die Bremsfangvorrichtung PC60DO.
Die Bremseinrichtung aufwärts PC60UP ist analog, jedoch um 180° gedreht.



Stückzahlen pro Fangvorrichtung

Heberangriff oben	Heberangriff unten						
2	2	Augenschraube	17	–	–	–	
2	2	Druckfeder	16	–	–	–	
2	2	Einstellschraube M6	15	–	–	–	
4	4	Aufnahmeachse	14	–	2020-36-4	–	
2	2	Bremsbacke	13	–	60DA-16-2	–	
2	2	Keilführungsblech	12	–	60DO-15-1a/b	–	
2	2	Bremskeil	11	–	60DA-12-2/-4	–	
1	1	Seilschlossgarnitur	10	–	FV-MZ30-1	–	
1	1	Rückzugfeder 125mm	9	–	FV-MZ20-1	–	
1	1	Anschlag - Auslösehülse	8	–	DA-MZ28-3	–	
1	1	Endschalter	7	–	DA-MZ05-2	–	
1	1	2 Stützblech	6	–	60DA-MZ45-3	–	
1	1	2 Führungsschuhplatte	5	–	60DA-MZ40-1	–	
1	1	2 Anschlagwinkel	4	–	60DO-MZ24-1	–	
–	1	4 Knotenblech KBU (unten)	3	–	60DA-MZ19-5	–	
1	–	4 Knotenblech KBO (oben)	3	–	60DA-MZ19-1	–	
1	1	2 Heber Li+Re	2	–	60DA-MZ01-1	–	
–	1	Grundeinheit	1	–	60DA-N240D16	–	
1	–	Grundeinheit	1	–	60DA-N240U16	–	
Stk.	Stk.	Gegenstand	Pos.	Werkstoff	Modell		Bemerkungen

Änderung: (Dat/Ind)
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-
-
-

Ausgabe:
24.09.09 / DH

Zusammenstellung

zu Betriebsanleitung
FV-Typ: PC60DO, PC60UP

Massstab	Gezeichnet	25.08.09	DH
1 : 4	Kontrolliert	24.09.09	DH
–	Geprüft	24.09.09	HG
–	Ersatz für:	–	

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Zeichnungsnummer
60DO-BA01-2